

CLAIM AMENDMENTS:

Please cancel Claims 3, 7-12, 26 and 27, amend Claims 1, 2, and 4-6, and add new Claims 28-30, as follows:

1. (Currently Amended) ~~[[An]]~~ A scanning optical system ~~in which a plurality of light beams emitted from which includes:~~

~~a plurality of light source means are deflected and scanned by a plurality of different deflected facets of a common optical deflecting unit, and a plurality of scanning surfaces are scanned with the ; and~~

~~a polygon mirror which deflects and scans a plurality of light beams respectively emitted from the plurality of light source means, for imaging the plurality of light beams deflected and scanned by different deflecting facets of the polygon mirror on a plurality of different scanned surfaces, respectively, said scanning optical system being characterized in that~~

~~wherein the number of the light source means is  $4n$ , the number of the light beams is  $4nm$  ( $n$  and  $m$  are positive integers, respectively),~~

~~incidence of optical paths of the light beams incident on the optical deflecting unit polygon mirror are symmetrically disposed with respect to a sub-scanning first cross section and a second main scanning cross section which,~~

~~the sub-scanning cross section and the main scanning cross section are perpendicular to each other, the first sub-scanning cross section is parallel to a rotational axis of the optical deflecting unit polygon mirror, and the second main scanning direction is perpendicular to the rotational axis of the optical deflecting unit polygon mirror,~~

a plurality of optical elements are respectively provided for the plurality of light source means, and are constructed in a united form to form a compound imaging element, and the compound imaging element is disposed between the plurality of light source means and the polygon mirror,

the plurality of optical elements respectively form linear images of the light beams, along a main scanning direction, on the corresponding deflecting facets, and

the compound imaging element includes a first compound optical element formed by the optical elements which make the plurality of light beams of which number is  $2n\pi$  among the plurality of light beams, incident onto a first deflecting facet among the different facets of the polygon mirror, and a second compound optical element formed by the optical elements which make the plurality of light beams of which number is  $2n\pi$  among the plurality of light beams, incident onto a second deflecting facet among the different facets of the polygon mirror.

2. (Currently Amended) A scanning optical system according to Claim 1, wherein relative angles between the light beams incident on the different deflecting facets of the ~~optical deflecting unit~~ polygon mirror are different from each other between cases where the light beams are projected on the first sub-scanning cross section and ~~where the relative angle is the~~ light beams are projected on the second main scanning cross section.

3. (Cancelled)

4. (Currently Amended) A scanning optical system according to Claim [[28]]  
1, wherein each of the optical elements constituting the compound imaging elements has  
different powers in a the main scanning cross section and a the sub-scanning cross section.

5. (Currently Amended) A scanning optical system according to Claim [[3]] 1,  
wherein each of the optical elements constituting the compound imaging elements includes a  
cylindrical lens having power in a the sub-scanning cross section.

6. (Currently Amended) A scanning optical system according to Claim [[28]]  
1, wherein a condition of  $0.7 < (L/\sin\theta)/F_s < 1.3$  is satisfied where  $F_s$  is a focal length of each of an  
the optical elements constituting the compound imaging elements in the sub-scanning cross  
section,  $2\theta$  is a relative angle between optical axes of the optical elements of the compound  
imaging elements in the sub-scanning cross section, and  $2L$  is a distance between optical axes of  
the optical elements on the compound imaging element in the sub-scanning cross section.

7.-12. (Cancelled)

13. (Withdrawn) A scanning optical system in which a plurality of light  
beams emitted from a plurality of light source means are caused to enter a deflecting facets of an  
optical deflecting unit at different angles in the sub-scanning cross section, and a scanned surface  
is scanned with the light beams deflected and scanned by the deflecting facet, respectively, said  
scanning optical system being characterized in that optical elements are provided for the light

beams emitted by the plural light source means, respectively, the optical elements are constructed in a united form to construct a compound imaging element, the compound imaging element is disposed between the light source means and the optical deflecting unit, the optical elements constituting the compound imaging element guide the light beams to the deflecting facet, and angles  $\alpha_1$  and  $\alpha_2$  formed between optical axes of two optical elements of the optical elements and a normal to the deflecting facet are different from each other between the two optical elements.

14. (Withdrawn) A scanning optical system according to Claim 13, wherein each of the optical elements constituting the compound imaging element has different powers in a main scanning cross section and a sub-scanning cross section, respectively.

15. (Withdrawn) A scanning optical system according to Claim 13, wherein the compound imaging element includes a cylindrical lens having power in a sub-scanning cross section.

16. (Withdrawn) A scanning optical system according to Claim 13, wherein a condition of  $0.7 < (L/\sin\theta)/F_s < 1.3$  is satisfied where  $F_s$  is a focal length of an optical element constituting the compound imaging element in the sub-scanning cross section,  $2\theta$  is a relative angle between optical axes of the optical elements of the compound imaging element in the sub-scanning cross section, and  $2L$  is a distance between optical axes of the optical elements on the compound imaging element in the sub-scanning cross section.

17. (Withdrawn) A scanning optical system according to Claim 14, wherein a condition of  $0.7 < (L/\sin\theta)/F_s < 1.3$  is satisfied where  $F_s$  is a focal length of an optical element constituting the compound imaging element in the sub-scanning cross section,  $2\theta$  is a relative angle between optical axes of the optical elements of the compound imaging element in the sub-scanning cross section, and  $2L$  is a distance between optical axes of the optical elements on the compound imaging element in the sub-scanning cross section.

18. (Withdrawn) A scanning optical system according to Claim 15, wherein a condition of  $0.7 < (L/\sin\theta)/F_s < 1.3$  is satisfied where  $F_s$  is a focal length of an optical element constituting the compound imaging element in the sub-scanning cross section,  $2\theta$  is a relative angle between optical axes of the optical elements of the compound imaging element in the sub-scanning cross section, and  $2L$  is a distance between optical axes of the optical elements on the compound imaging element in the sub-scanning cross section.

19. (Withdrawn) A scanning optical system according to Claim 13, wherein the compound imaging element includes a first optical element and a second optical element, and the first optical element causes the light beams to enter a first deflecting facet of the optical deflecting unit and the second optical element causes the other light beams to enter a second deflecting facet, such that these plural light beams can be simultaneously deflected and scanned to scan the different scanned surfaces, respectively.

20. (Withdrawn) A scanning optical system according to Claim 13,

wherein the compound imaging element includes a first optical element and a second optical element, and the first optical element causes the light beams to enter a first deflecting facet of the optical deflecting unit and the second optical element causes the other light beams to enter the first deflecting facet, such that these plural light beams can be simultaneously deflected and scanned to scan the different scanned surfaces, respectively.

21. (Withdrawn) A scanning optical system according to Claim 19, wherein the first optical element and the second optical element are constructed in a united form.

22. (Withdrawn) A scanning optical system according to Claim 13, wherein a synchronous detecting optical element for guiding a portion of the light beam deflected and scanned by the optical deflecting unit is constructed in a united form with the compound imaging element.

23. (Withdrawn) A scanning optical system according to Claim 22, wherein the synchronous detecting optical element is disposed away from the optical elements constituting the compound imaging element in a sub-scanning cross section.

24. (Withdrawn) A scanning optical system according to Claim 13, wherein one of incidence and emergence surfaces of each of the optical elements is an anamorphic surface, the other is a rotationally symmetric surface or a plane surface, and optical axes of the optical elements are symmetrically disposed with respect to two mutually perpendicular planes, respectively.

25. (Withdrawn) A compound imaging element comprising:

a plurality of optical elements, one of incidence and emergence surfaces of each of the optical elements being an anamorphic surface, the other being a rotationally symmetric surface or a plane surface; and

wherein optical axes of the optical elements are symmetrically disposed with respect to two mutually perpendicular planes, respectively, and the optical elements are constructed in a united form.

26. - 27. (Cancelled)

28. (New) A scanning optical system according to Claim 28, wherein one of incidence and emergence surface of each of the optical elements is an anamorphic surface and the other is a rotationally symmetric surface or a plane surface.

29. (New) An image forming apparatus comprising:

a scanning optical system according to Claim 28;

a photosensitive body disposed on the scanned surface;

developing means for developing an electrostatic latent image, which is formed on the photosensitive body by the light beam scanned by the scanning optical system, as a toner image;

transferring means for transferring the developed toner image onto a transferring material; and

fixing means for fixing the transferred toner image on the transferring

material.

30. (New) An image forming apparatus comprising:

a scanning optical system according to Claim 28; and

a printer controller for converting code data input from an external apparatus into image signals to supply the image signals to the scanning optical system.